TWO MINUTE TRAINING

TO: *CH2M HILL PLATEAU REMEDIATION COMPANY*

FROM: *PAUL W. MARTIN, RCRA Subject Matter Expert*
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SUBJECT: *PCB CONCENTRATIONS AND MICROGRAMS PER CENTIMETERS SQUARED ($\mu g/cm^2$)*

DATE: *FEBRUARY 25, 2016*

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TWO MINUTE TRAINING

SUBJECT: PCB Concentrations and Micrograms per Centimeters Squared (µg/cm^2)

Q: A customer takes a standard wipe sample of a PCB spill area that has been decontaminated – the customer hopes. The analytical results indicate a PCB concentration of 9 µg/100 cm^2. The customer is more familiar with PCB concentrations in parts per millions, i.e., ≥50 ppm is regulated and < 50 ppm is not regulated. Is this PCB spill area considered regulated or no longer regulated for PCBs?

A: Per 40 CFR 761.1(b)(3) it basically states that most provisions in this part apply only if PCBs are present in concentrations above a specified level. Prohibitions that apply to PCBs at concentrations of:

- <50 ppm apply also to contaminated surfaces at PCB concentrations of ≤10 µg/100 cm^2,
- ≥50 to <500 ppm apply also to contaminated surfaces at PCB concentrations of >10/100 cm^2 to <100 µg/100 cm^2,
- ≥500 ppm apply also to contaminated surfaces at PCB concentrations of ≥100 µg/100 cm^2.

As further clarification, the June 2014 EPA TSCA PCB Question and Answer Manual on page 3 includes this table concerning a decontaminated PCB Transformer and the wipe sample concentrations:

If the concentration of the wipe sample is . . .	**Then** the transformer is regulated as . . .
≤10 µg/100 cm^2	non-PCB
>10 but <100 µg/100 cm^2	PCB-Contaminated
>100 µg/100 cm^2 PCB Transformer	PCB Transformer

Since the customer's standard wipe sample result was 9 µg/100 cm^2 which is below the ≤10 µg/100 cm^2 threshold that equates to <50 ppm PCBs, the customer's spill area is considered nonregulated for PCBs, i.e., non-PCB.

SUMMARY:

- ≤10 µg/100 cm^2 equals non-PCB or <50 ppm.
- >10 but <100 µg/100 cm^2 equals PCB-Contaminated or ≥50 ppm to <500 ppm.
- >100 µg/100 cm^2 equals PCB regulated or ≥500 ppm.

Excerpts from 40 CFR 761.3, 40 CFR 761.123 and the June 2014 PCB Q&A are attached to the e-mail. If you have any questions, contact me at Paul_W_Martin@rl.gov or at (509) 376-6620.

TWO MINUTE TRAINING - ATTACHMENT

SUBJECT: PCB Concentrations and Micrograms per Centimeters Squared (µg/cm^2)

40 CFR 761.3 Definitions

PCB-Contaminated means a non-liquid material containing PCBs at concentrations ≥50 ppm but <500 ppm; a liquid material containing PCBs at concentrations ≥50 ppm but <500 ppm or where insufficient liquid material is available for analysis, a non-porous surface having a surface concentration >10 µg/100 cm^2 but <100 µg/100 cm^2, measured by a standard wipe test as defined in §761.123.

Standard wipe sample means a sample collected for chemical extraction and analysis using the standard wipe test as defined in §761.123. Except as designated elsewhere in part 761, the minimum surface area to be sampled shall be 100 cm^2.

40 CFR Part 761.123 Definitions

Standard wipe test means, for spills of high-concentration PCBs on solid surfaces, a cleanup to numerical surface standards and sampling by a standard wipe test to verify that the numerical standards have been met. This definition constitutes the minimum requirements for an appropriate wipe testing protocol. A standard-size template (10 centimeters (cm) × 10 cm) will be used to delineate the area of cleanup; the wiping medium will be a gauze pad or glass wool of known size which has been saturated with hexane. It is important that the wipe be performed very quickly after the hexane is exposed to air. EPA strongly recommends that the gauze (or glass wool) be prepared with hexane in the laboratory and that the wiping medium be stored in sealed glass vials until it is used for the wipe test. Further, EPA requires the collection and testing of field blanks and replicates.

June 2014 Version
Revisions to the PCB Q and A Manual
(June 2014)

§761.1(b)(3) Bulk and surface concentrations

2. Q: May I characterize a drained transformer from which the core, coil, and all free-flowing liquids have been removed by taking a wipe sample from the inside surface of the transformer?

A: Yes. However, the wipe sample results may only be used for purposes of disposal (i.e., the drained carcass is not authorized for use). Refer to the following table (§761.1(b)(3)):

If the concentration of the wipe sample is . . .	**Then** the transformer is regulated as . . .
≤10 µg/100 cm2	non-PCB
>10 but <100 µg/100 cm2	PCB-Contaminated
>100 µg/100 cm2 PCB Transformer	PCB Transformer